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			2623	TALERNOMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)	
Office Action Summary		09/846,849	SCHWARTZMAN ET AL.	
		Examiner	Art Unit	
		Joseph G. Ustaris	2623	
Period fo	The MAILING DATE of this communication apport	pears on the cover sheet with the	correspondence address	
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Status				
2a)⊠	Responsive to communication(s) filed on 13 A This action is FINAL . 2b) This Since this application is in condition for allowa closed in accordance with the practice under B	s action is non-final. nce except for formal matters, p		
Dispositi	ion of Claims			
5)□ 6)⊠ 7)□	Claim(s) <u>1-63</u> is/are pending in the application 4a) Of the above claim(s) is/are withdra Claim(s) is/are allowed. Claim(s) <u>1-63</u> is/are rejected. Claim(s) is/are objected to. Claim(s) are subject to restriction and/or	wn from consideration.		
Applicati	ion Papers	•		
9) 🗌	The specification is objected to by the Examine	er.		
10)	The drawing(s) filed on is/are: a) acc	cepted or b) objected to by the	e Examiner.	
	Applicant may not request that any objection to the			
11)	Replacement drawing sheet(s) including the correct The oath or declaration is objected to by the Ex	•	-	
Priority (under 35 U.S.C. § 119			
a)l	Acknowledgment is made of a claim for foreign All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the priority application from the International Burea See the attached detailed Office action for a list	ts have been received. ts have been received in Applica prity documents have been recei u (PCT Rule 17.2(a)).	ation No ived in this National Stage	
Attachmen	t(s)			
1) Notic	e of References Cited (PTO-892)	4) Interview Summa		
3) 🔲 Infor	e of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) or No(s)/Mail Date	Paper No(s)/Mail 5) Notice of Informa 6) Other:	Patent Application (PTO-152)	

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment dated 13 April 2006 in application 09/846,849. Claims 1-63 are pending. Claim 1 is amended.

Claim Rejections - 35 USC § 103

- 2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4-7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al. (US005883901A) in view of Quigley et al. (US006785564B1) and Sawyer et al. (US006765925B1).

Regarding claim 1, Chiu et al. (Chiu) discloses a system for disabling and enabling receiver circuitry in a cable modem connected to a headend in a cable modem network (See Fig. 1; column 5 lines 20-34, column 11 lines 44-54, and column 12 lines 45-51). The signal conversion system (SCS) at the headend "transmits a first message with first instructions from the headend to the cable modem to disable the cable modem receiver circuitry" (See column 12 lines 45-51). The SCS of the headend "sets an indication of the cable modem receiver circuitry state to disabled" within the control frame subtype (See column 11 lines 44-54 and column 12 lines 45-51). Furthermore, the SCS at the headend can "transmit a second message with second instructions from

the headend to enable the cable modem receiver circuitry" (See column 12 lines 45-51). The SCS of the headend also "sets the indication of the cable modem receiver circuitry state to enabled" within the control frame subtype (See column 11 lines 44-54 and column 12 lines 45-51). However, Chiu does not disclose (1) disabling the cable modem for periodic intervals separated by activation windows, where any message received during a period outside the activation window is ignored and (2) maintaining at the headend an indication of cable modem receiver circuitry state.

(1) Inherently, while a cable modem is disabled, it no longer fully functions. Quigley et al. (Quigley) discloses a cable modem system that is able to control cable modems (See Fig. 1). The cable modem termination system (CMTS) at the headend is able to periodically or "period intervals" disable forward tuning and demodulation circuits or "receiver circuitry" of the cable modems within the system when the cable modem report periods of inactivity. The portions of times when the cable modem is in active state or enabled is considered the "activation window", wherein the times the cable modem is enabled separates the "periodic intervals" of when the cable modem is in standby state or disabled. When the cable modem is in standby state or disabled, any signals received are ignored or "messages received during a period outside the activation window is ignored". However, any signals received while the cable modem is not disabled or "within the activation window" will be processed (See column 4 line 25 column 5 line 42). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the SCS at the headend and cable modem disclosed by Chiu to be able to disable the cable modem for periodic intervals

where any message received during a period outside the activation window is ignored, as taught by Quigley, in order to provide a more efficient means of controlling the state of the cable modern thereby providing a better power management system that reduces the power consumption of the cable moderns without introducing significant latency.

(2) Sawyer et al. (Sawyer) discloses a system and method of maintaining state in a data transmission system with cable modems. Sawyer discloses that the CMTS stores state information for each cable modem. The state information includes information pertaining to the state of communications between the CMTS and the cable modem (e.g. the channel the cable modem is using) or "maintaining at the headend an indication of cable modem receiver circuitry state" (See col. 1 line 42 – col. 2 line 35). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the headend/CMTS to "maintain at the headend an indication of cable modem receiver circuitry state", as taught by Sawyer, in order to provide a central location and an efficient means of handling all state information of the cable modems.

Regarding claim 2, the disable message is a "unicast SYNCH message", wherein the message is directed to a particular cable modem (See column 8 lines 9-20 and column 12 lines 45-51).

Regarding claim 4, the enable message is also a "unicast SYNCH message", wherein the message is directed to a particular cable modem (See column 8 lines 9-20 and column 12 lines 45-51).

Regarding claim 5, Chiu in view of Quigley and Sawyer discloses that various time periods can be defined for when the receiver is enabled or disabled based on the predetermined sleep interval (See Quigley column 4 line 25 – column 5 line 42).

Official Notice is taken that is well known schedule an "activation window" for any amount of time (e.g. 100 milliseconds). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the "activation window" disclosed by Chiu in view of Quigley and Sawyer to be any amount of time (e.g. 100 milliseconds) in order to provide more options for the system to protect the access to the network.

Regarding claim 6, Chiu in view of Quigley and Sawyer discloses that various time periods can be defined for when the receiver is enabled or disabled based on the predetermined sleep interval (See Quigley column 4 line 25 – column 5 line 42).

Official Notice is taken that is well known schedule the "periodic intervals" for any amount of time (e.g. 10 seconds). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the "periodic intervals" disclosed by Chiu in view of Quigley and Sawyer to be any amount of time (e.g. 10 seconds) in order to provide more options for the system to protect the access to the network.

Regarding claim 7, when the cable modem is disabled for the "periodic intervals", inherently received messages are ignored as discussed in claim 1 above.

Regarding claim 9, when the cable modem is disabled for the "periodic intervals", inherently the transmitter circuitry is also disabled.

Regarding claim 10, inherently, when the cable modem is disabled, the transmitter circuitry is also disabled as discussed in claim 9 above. Therefore, no messages are transmitted from the cable modem to the headend.

Claims 11-19, 21-29, 31-34, 36-39, 41-50, 52-60, 62, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al. (US005883901A) in view of Quigley et al. (US006785564B1).

Regarding claim 11, Chiu et al. (Chiu) discloses a system for disabling and enabling receiver circuitry in a cable modem connected to a headend in a cable modem network (See Fig. 1; column 5 lines 20-34, column 11 lines 44-54, and column 12 lines 45-51). The signal conversion system (SCS) at the headend "transmits a first message with first instructions from the headend to the cable modem to disable the cable modem receiver circuitry" (See column 12 lines 45-51). The SCS of the headend "sets an indication of the cable modem receiver circuitry state to disabled" within the control frame subtype (See column 11 lines 44-54 and column 12 lines 45-51). Furthermore, the SCS at the headend can "transmit a second message with second instructions from the headend to enable the cable modern receiver circuitry" (See column 12 lines 45-51). The SCS of the headend also "sets the indication of the cable modem receiver circuitry state to enabled" within the control frame subtype (See column 11 lines 44-54 and column 12 lines 45-51). Furthermore, the cable modem receives the commands and disables/enables the cable modem according to the instructions within the messages. However, Chiu does not disclose disabling the cable modem for periodic intervals

separated by activation windows, where any message received during a period outside the activation window is ignored.

Inherently, while a cable modem is disabled, it no longer fully functions. Quigley et al. (Quigley) discloses a cable modem system that is able to control cable modems (See Fig. 1). The cable modem termination system (CMTS) at the headend is able to periodically or "period intervals" disable forward tuning and demodulation circuits or "receiver circuitry" of the cable modems within the system when the cable modem report periods of inactivity. The portions of times when the cable modem is in active state or enabled is considered the "activation window", wherein the times the cable modem is enabled separates the "periodic intervals" of when the cable modem is in standby state or disabled. When the cable modem is in standby state or disabled, any signals received are ignored or "messages received during a period outside the activation window is ignored". However, any signals received while the cable modem is not disabled or "within the activation window" will be processed (See column 4 line 25 column 5 line 42). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the SCS at the headend and cable modem disclosed by Chiu to be able to disable the cable modem for periodic intervals where any message received during a period outside the activation window is ignored, as taught by Quigley, in order to provide a more efficient means of controlling the state of the cable modem thereby providing a better power management system that reduces the power consumption of the cable modems without introducing significant latency.

Regarding claim 12, the disable message is a "unicast SYNCH message", wherein the message is directed to a particular cable modem (See column 8 lines 9-20 and column 12 lines 45-51).

Regarding claim 13, Chiu in view of Quigley discloses that the cable modem has a tuner (See Fig. 3, tuner 303). However, Chiu in view of Quigley does not explicitly disclose that the tuner includes an RF amplifier, a mixer, a phase lock loop, and an IF amplifier.

Official Notice is taken that it is well known for tuners to include an RF amplifier, a mixer, a phase lock loop, and an IF amplifier. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the tuner of the cable modern disclosed by Chiu in view of Quigley to include an RF amplifier, a mixer, a phase lock loop, and an IF amplifier in order to provide a more efficient tuner thereby enhancing the performance of the tuner.

Regarding claim 14, the receiver further comprises a demodulator (See Chiu column 17 lines 7-10).

Regarding claim 15, the cable modem receiver further comprises one or more processors coupled with memory (See Chiu Fig. 3, microprocessor 302 and memory 309).

Regarding claim 16, the enable message is also a "unicast SYNCH message", wherein the message is directed to a particular cable modem (See column 8 lines 9-20 and column 12 lines 45-51).

Regarding claim 17, Chiu in view of Quigley discloses that various time periods can be defined for when the receiver is enabled or disabled based on the predetermined sleep interval (See Quigley column 4 line 25 – column 5 line 42).

Official Notice is taken that is well known schedule an "activation window" for any amount of time (e.g. 100 milliseconds). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the "activation window" disclosed by Chiu in view of Quigley to be any amount of time (e.g. 100 milliseconds) in order to provide more options for the system to protect the access to the network.

Regarding claim 18, Chiu in view of Quigley discloses that various time periods can be defined for when the receiver is enabled or disabled based on the predetermined sleep interval (See Quigley column 4 line 25 – column 5 line 42).

Official Notice is taken that is well known schedule the "periodic intervals" for any amount of time (e.g. 10 seconds). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the "periodic intervals" disclosed by Chiu in view of Quigley to be any amount of time (e.g. 10 seconds) in order to provide more options for the system to protect the access to the network.

Regarding claim 19, when the cable modem is disabled for the "periodic intervals", inherently received messages are ignored as discussed in claim 1 above.

Regarding claim 21, when the cable modem is disabled for the "periodic intervals", inherently the transmitter circuitry is also disabled.

Regarding claim 22, inherently, when the cable modem is disabled, the transmitter circuitry is also disabled as discussed in claim 9 above. Therefore, no messages are transmitted from the cable modem to the headend.

Claim 23 contains the limitations of claim 11 (where inherently the SCS of the headend executes a computer program that has program instructions on a machine readable medium) and is analyzed as previously discussed with respect to that claim.

Claim 24 contains the limitations of claims 12 and 23 and is analyzed as previously discussed with respect to those claims.

Claim 25 contains the limitations of claims 16 and 23 and is analyzed as previously discussed with respect to those claims.

Claim 26 contains the limitations of claims 17 and 23 and is analyzed as previously discussed with respect to those claims.

Claim 27 contains the limitations of claims 18 and 23 and is analyzed as previously discussed with respect to those claims.

Claim 28 contains the limitations of claim 11 (wherein the headend transmits the messages) and is analyzed as previously discussed with respect to that claim.

Furthermore, the headend has memory and one or more processors (See Chiu Fig. 2, CPU 209 and RAM).

Claim 29 contains the limitations of claims 12 and 28 and is analyzed as previously discussed with respect to those claims.

Claim 31 contains the limitations of claims 16 and 28 and is analyzed as previously discussed with respect to those claims.

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Claim 32 contains the limitations of claims 17 and 28 and is analyzed as previously discussed with respect to those claims.

Claim 33 contains the limitations of claims 18 and 28 and is analyzed as previously discussed with respect to those claims.

Claim 34 contains the limitations of claims 19 and 28 and is analyzed as previously discussed with respect to those claims.

Claim 36 contains the limitations of claims 21 and 28 and is analyzed as previously discussed with respect to those claims.

Claim 37 contains the limitations of claims 22 and 28 and is analyzed as previously discussed with respect to those claims.

Claim 38 contains the limitations of claim 11 (wherein the cable modem or "apparatus" has a transmitter, memory, one or more processors, and a receiver (See Chiu Fig. 3)) and is analyzed as previously discussed with respect to that claim.

Claim 39 contains the limitations of claims 12 and 38 and is analyzed as previously discussed with respect to those claims.

Claim 41 contains the limitations of claims 16 and 38 and is analyzed as previously discussed with respect to those claims.

Claim 42 contains the limitations of claims 13 and 38 and is analyzed as previously discussed with respect to those claims.

Claim 43 contains the limitations of claims 14 and 42 and is analyzed as previously discussed with respect to those claims.

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Claim 44 contains the limitations of claims 15 and 43 and is analyzed as previously discussed with respect to those claims.

Claim 45 contains the limitations of claims 11 and is analyzed as previously discussed with respect to that claim.

Claim 46 contains the limitations of claims 12 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 47 contains the limitations of claims 16 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 48 contains the limitations of claims 17 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 49 contains the limitations of claims 18 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 50 contains the limitations of claims 19 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 52 contains the limitations of claims 21 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 53 contains the limitations of claims 22 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 54 contains the limitations of claim 11 and is analyzed as previously discussed with respect to that claim.

Claim 55 contains the limitations of claims 12 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 56 contains the limitations of claims 13 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 57 contains the limitations of claims 14 and 56 and is analyzed as previously discussed with respect to those claims.

Claim 58 contains the limitations of claims 15 and 57 and is analyzed as previously discussed with respect to those claims.

Claim 59 contains the limitations of claims 16 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 60 contains the limitations of claims 19 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 62 contains the limitations of claims 21 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 63 contains the limitations of claims 22 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al. (US005883901A) in view of Quigley et al. (US006785564B1) and Sawyer et al. (US006765925B1) as applied to claims 1, 2, 4-7, 9, and 10 above, and further in view of Brusaw (US005523781A).

Regarding claim 3, Chiu in view of Quigley and Sawyer does not explicitly disclose that the messages contain periodic intervals and activation window information.

Brusaw discloses a system for controlling a television by using control messages (See column 3 line 63 – column 4 line 2). Brusaw discloses that the messages can contain times or "periodic intervals and activation window information" of when certain commands are to be executed (See column 10 line 66 – column 11 line 10). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the messages disclosed by Chiu in view of Quigley and Sawyer to include periodic intervals and activation window information, as taught by Brusaw, in order to provide a more efficient means of transporting various commands and command attributes to and from the headend and cable modem.

Claims 30 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al. (US005883901A) in view of Quigley et al. (US006785564B1) as applied to claims 11-19, 21-29, 31-34, 36-39, 41-50, 52-60, 62, and 63 above, and further in view of Brusaw (US005523781A).

Regarding claim 30, Chiu in view of Quigley does not explicitly disclose that the messages contain periodic intervals and activation window information.

Brusaw discloses a system for controlling a television by using control messages (See column 3 line 63 – column 4 line 2). Brusaw discloses that the messages can contain times or "periodic intervals and activation window information" of when certain commands are to be executed (See column 10 line 66 – column 11 line 10). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the messages disclosed by Chiu in view of Quigley to include

periodic intervals and activation window information, as taught by Brusaw, in order to provide a more efficient means of transporting various commands and command attributes to and from the headend and cable modem.

Claim 40 contains the limitations of claims 30 and 39 and is analyzed as previously discussed with respect to those claims.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al. (US005883901A) in view of Quigley et al. (US006785564B1) and Sawyer et al. (US006765925B1) as applied to claims 1, 2, 4-7, 9, and 10 above, and further in view of Wall et al. (US 20030037160A1).

Regarding claim 8, Chiu in view of Quigley and Sawyer does not disclose that the cable modem ignores multicast messages during an "activation window".

Wall et al. (Wall) discloses a system that is able to control the entry of data to a network environment. Wall discloses that some network nodes are configured to automatically ignore multicast messages (See paragraph 0018). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the cable modem disclosed by Chiu in view of Quigley and Sawyer to be configured to ignore multicast messages, as taught by Wall, in order to provide a more secure and bandwidth efficient connection to the network.

Claims 20, 35, 51, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al. (US005883901A) in view of Quigley et al.

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(US006785564B1) as applied to claims 11-19, 21-29, 31-34, 36-39, 41-50, 52-60, 62, and 63 above, and further in view of Wall et al. (US 20030037160A1).

Regarding claim 20, Chiu in view of Quigley does not disclose that the cable modem ignores multicast messages during an "activation window".

Wall et al. (Wall) discloses a system that is able to control the entry of data to a network environment. Wall discloses that some network nodes are configured to automatically ignore multicast messages (See paragraph 0018). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the cable modern disclosed by Chiu in view of Quigley to be configured to ignore multicast messages, as taught by Wall, in order to provide a more secure and bandwidth efficient connection to the network.

Claim 35 contains the limitations of claims 20 and 28 and is analyzed as previously discussed with respect to those claims.

Claim 51 contains the limitations of claims 20 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 61 contains the limitations of claims 20 and 54 and is analyzed as previously discussed with respect to those claims.

Response to Arguments

3. Applicant's arguments with respect to claims 1-10 have been considered but are most in view of the new ground(s) of rejection.

Furthermore, applicant's arguments filed 13 April 2006 with respect to claims 1-63 have been fully considered but they are not persuasive.

Applicant argues with respect to claims 1, 11, 23, 28, 38, 45, and 54 that Chiu and Quigley does not disclose "instructions from the headend to disable the cable modem receiver circuitry for periodic intervals separated by activation windows". However, reading the claims in the broadest sense, Chiu in view of Quigley does meet the limitations of the claim. Quigley discloses that the cable modem termination system (CMTS) at the headend is able to periodically instruct the cable modems to disable forward tuning and demodulation circuits or "receiver circuitry" of the cable modems within the system when the cable modem report periods of inactivity by sending. The portions of times when the cable modem is in active state or enabled is considered the "activation window", wherein the times the cable modem is enabled separates the "periodic intervals" of when the cable modem is in standby state or disabled (See column 4 line 25 – column 5 line 42).

Furthermore, applicant argues that the disabling of the cable modem is performed without any coordination with the headend. However, Quigley discloses that prior to disabling the cable modem, the cable modem requests a sleep interval from the headend (See col. 5 lines 10-11 and 33-42, col. 12 lines 33-46).

Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph G. Ustaris whose telephone number is 571-272-7383. The examiner can normally be reached on M-F 7:30-5PM; Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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JGU

June 19, 2006

CHRIS KELLEY

SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2600